GABRIELA DJUHADI

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See my personal introduction at: https://gaby13524.github.io/Portfolio/

EXPERIENCE

Research Assistant, Fraunhofer Institute FOKUS Mar. 2023 – Jan. 2026

Involved in microservices development for the Common Learning Middleware (CLM) as part of a broader internal project portfolio. Ensured compliance with Learning Technologies standards to support interoperability and standardized learning data transfer.

- **Frontend**: Designed and implemented frontend components in full-stack applications, e.g. learner dashboards and course search pages. Integrated learning tools into external platforms via iframe and Picture-in-Picture mode. Strengthened skills in React, state management (Zustand/Redux), browser storage, and Auth tokens.
- **Backend**: Contributed to backend development including REST API endpoint implementation and management, database interactions with non-/relational databases (MongoDB/PostgreSQL), Docker-based containerization, and integration across multiple internal projects. Implemented additional logic as required.
- Engaged in code reviews, Git collabration, and presented project progress in symposiums.

Tech Stack: JavaScript/TypeScript, React, Redux, Zustand, Next.js, SQL/noSQL DB, REST APIs, Docker, Git, Appium, Playwright

PROJECTS

Thesis: Drosophila Brain Registration for Individuality Oct. 2024 - Oct. 2025

Developed a full preprocessing and registration pipeline for 3D confocal brain image stacks to analyze morphological variation within and between individuals.

- Identified and implemented effective noise-reduction and intensity-adjustment preprocessing techniques.
- Adapted preprocessing steps to address morphological variation across samples, including removal of the lamina when present and separation of the central brain (CB) and optic lobes (OL) for improved registration accuracy.
- Designed a modified registration workflow that avoids shape and size alterations (except down-sampling) and applied inverse-registration parameters to enable accurate brain parcellation.

Liver Cancer Analysis - in-class project June 2023

Worked in a team of three to loosely replicate the methodology of Chaudhary et al., performing feature reduction on multi-omics data and training models to classify patient survivability.

- Applied Logistic Regression for feature reduction across multiple omics datasets, including tuning optimal model parameters for each data type.
- Conducted preliminary data analysis, cleaning, and normalization for an SVM classifier, followed by class balancing using synthetic oversampling and selective undersampling techniques.
- Trained and evaluated two classifiers (SVM and Gradient Boost), analyzed ROC curves, and examined important features to generate a survivability analysis.

Tech Stack: Python, Scikit Learn, Amira, ANTsPy, CMTK, Pandas, Numpy, SimpleITK

EDUCATION

Freie Universität Berlin Oct. 2022 - Feb. 2026
M.Sc. Bioinformatics
Relevant coursework: Applied Machine Learning in Bioinformatics, Data Science in Life Sciences, Resampling Methods

University of California, Los Angeles Sept. 2017 - June 2020
B.S. Chemical Engineering, Minor in Bioinformatics
Relevant coursework: Algorithms in Bioinformatics, Intro to Computer Science (C++), Algorithm Design

OTHERS

Languages: Indonesian (native), English (fluent), German (professional)